REMARKS

Claims 1-34 are pending in the present Application. Claim 27 is withdrawn from consideration. Claims 28-31 have been cancelled and Claim 35 has been added, leaving Claims 1-26 and 32-35 for consideration upon entry of the present Amendment.

Claim 35 has been added to further claim the present invention. Support for this new claim can at least be found in Examples 4-9 as originally filed.

Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1, 3, 4, 15-20, 22, 24-26, 33 and 34 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over JP 2000-302877 to Yamatomo, et al. (Yamatomo). Applicants respectfully traverse this rejection.

Yamamoto teaches a method of making a compression molded body of poly(arylene ether) and then crushing it in order to obtain a particulate poly(arylene ether) having a decreased amount of fine particles. Yamamoto teaches that the molding temperature can be 5 to 200°C (paragraph 0022) but a marked preference is shown for temperatures of 80 to 165°C. Yamamoto makes no explicit disclosure as to the ranges of pressure that can be used during compression molding except in the examples. The majority of the examples employ temperatures in excess of the upper bound of the amended claims. The exception is Comparative Examples 3 and 4. These comparative examples use a temperature of 3°C and pressures of 0.07 and 0.004 tons/cm^2 – far below the pressure required by the pending claims.

The Examiner has cited paragraphs [0008] and [0019] of Yamamoto for allegedly teaching utilizing pressure as required to achieve a density in the cited range of Yamamoto (0.7-1.055 g/cm^3). With regard to [0008] Yamamoto is silent with regard to pressure. Applicants respectfully note that [0019] of Yamamoto states "If the pressurization can be carried out until the density becomes 0.7-1.055 gm/cm^3 in a temperature range of 5-200°C, the effects of the present invention can be sufficiently obtained." (emphasis added). As the subject of [0019] of Yamamoto is molding machines that can be used Yamamoto could

appear to be teaching that the cited equipment is applicable only if sufficient pressure can be generated to achieve the cited density. Thus, Yamamoto would appear to be teaching a relationship between pressure and density but would also indicate a lack of knowledge and teaching with regard to the pressures required to achieve the cited densities at temperatures outside of those used in the Examples. Indeed, taken more broadly Yamamoto would appear to indicate that sufficient pressurization may not be able to be achieved.

Applicants further note that one of skill in the art would understand that the PPE powder used by Yamamoto in the examples would contain a range of molecular weights. Molecular weight affects the glass transition temperature. Accordingly, at the temperatures actually used successfully by Yamamoto (greater than or equal to 120°C) a skilled artisan would recognize that the molding temperature was greater than or equal to the glass transition temperature of the low molecular weight portion of the PPE powder. Thus, the low molecular weight PPE acts as a binder during compression – functioning to bind the remaining polymer into the cohered bodies described by Yamamoto. Yamamoto contains no examples where a body having the required density is made successfully at a temperature less than 120°C. In contrast, the pending claims require the use of a temperature which is below 120°C and below the glass transition temperature of any poly(arylene ether).

Applicants appreciate that Yamamoto teaches a broad temperature range (5-200°C) and obliquely indicates a relationship between pressure and density but the teachings of Yamamoto must be evaluated as a whole as one of ordinary skill would view it. An ordinarily skilled artisan would understand that Yamamoto's inventive examples indicate that a portion of the PPE is functioning as a binder and the comparative examples indicate that a molded body could likely not be made in the absence of some sort of a binder and in fact even in the presence of a binder (Comparative Examples 1 and 2) sufficient pressure must be applied. This would leave a skilled artisan with, at the very least, a great of deal of doubt as to the expected success of compression molding PPE in the temperature range required by the pending claims. Thus, in view of this doubt, the results found in the pending application and captured by the pending claims are surprising.

Claims 2, 5 and 6 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Yamatomo as applied to claims 1, 3, 4, 15-20, 22, 24-26, 33 and 34 above, and further

in view of Modern Plastics Handbook, edited by Charles A. Harper, Knovel release date: November 20, 2002 (the Handbook). Applicants respectfully traverse this rejection.

The Handbook has been cited for a general teaching with regard to compression molding. Applicants respectfully assert that this does not overcome the deficiencies of Yamamoto as described above.

Claim 7 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Yamatomo and the Handbook, and further in view of United States Patent No. 5,294,667 to Weiss, et al. (Weiss). Applicants respectfully traverse this rejection.

Weiss have been cited for teaching that compaction removes air contained between the interstices of loose powder. Neither the Handbook nor Weiss overcome the deficiencies of Yamamoto.

Claims 8, 10 and 12-14 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Yamatomo as applied to claims 1, 3, 4, 15-20, 22, 24-26, 33 and 34 above, and further in view of United States Patent No. 6,359,043 to Gijzen. Claims 28, 29 and 31 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Yamatomo in view of Gijzen. Claim 32 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Yamatomo in view of Gijzen. Applicants respectfully traverse these rejections.

Gijzen has been cited for teaches regarding additives. Gijzen provides no additional information with regard to the expectation of success of compression molding at the claimed temperatures.

Claims 28 and 30 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over United States Patent No. 3,356,761 to Fox. Claim 29 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Fox as applied to claim 28 above and further in view of United States Publication No. 2002/0198123. Claim 31 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Fox as applied to claims 28 and 30 above and further in view of JP 2000-167827 to Yamamoto, et al. (Yamamoto). Claims 28-31 have been cancelled.

New Claims

Claims 35 has been added to further claim the invention. Applicants note that there is no indication in any of the cited references regarding the relationship between compressive strength and the diameter to height ratio that is shown in the examples.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Response or otherwise, please charge them to Deposit Account No. 50-1131.

Respectfully submitted,

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